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The Future is Coming: Socioemotional Selectivity Theory and Temporal Agency

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The Future is Coming: Socioemotional Selectivity Theory and Temporal Agency

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Dedication

I dedicate this thesis to those who have helped me throughout the two years I have spent in the MA program. The length of this dedication is severely disproportional to the amount of gratitude I have – Dr. Matt McGlone, my thesis advisor, for being critical with his edits and generous with his time from the moment I stepped into his undergraduate course in 2014 ("Let's get started!"); Dr. Erin Donovan, my second reader, who by her teaching and example has redefined what supportive communication means to me, and taught me that old buffalos make good theoretical development guidelines (":-)"), Dr. Sam Shorey, for showing me, and allowing me to participate in, what I now consider the standard for classroom engagement ("The best class has low walls and a high ceiling."); Dr. Sharon Jarvis ("Theories - two old's and one new."), Dr. René Dailey, Jennifer Betancourt, Anne Bormann, and Aida Gonzalez for making this department and program feel like a family; the CMS graduate community, for being both friends and mentors; and Mark Stern, for charitably helping me cross the finish line. Thank you to my family – my mom, dad, Mary Kate, John, Patrick, Zach, Maureen, Neil, Nina, Jacqueline, Theresa, Anne, and Brendan, for their unconditional love. Thank you to my fiancé, Kate, for being my best friend, editor, and much to my dad's chagrin, convincing me to convert from a White Sox fan to a Cubs fan (the most heinous of crimes).

Finally, thank you to you, the one reading this now, for a moment of your time.

Abstract

The Future is Coming: Socioemotional Selectivity Theory and Temporal Agency

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When approaching the end of significant time intervals (e.g., one's lifespan, career, college experience, etc.), people tend to forgo the desire to acquire knowledge and instead seek out experiences that are emotionally fulfilling. People often encode their experience of temporal passage in these intervals using metaphorical language that assigns agency to themselves or the event (e.g., we're coming up on our vacation vs. our vacation is coming up). Embodiment theory suggests that our understanding of emotion and motion are intertwined, with positive feelings associated with approach and negative feelings associated with avoidance. This link can explain why agentic language is used within a temporal, and consequently, emotional, context. The reported study explores the relationship between imagined future life events and a communicator's temporal agentic language use. Participants (*N*=327) were asked to imagine future life events (a relationship, a job, or a vacation) and describe their imagined experience at the

beginning, middle, or end of the event (3 X 3 repeated measures factorial design). A reliable relationship between event component and agency assignment was observed. Specifically, communicators preferred to assign temporal agency to events when describing the end of an event than its beginning or middle, and preferred to assign temporal agency to themselves when describing the beginning of an event than it's ending or middle. This finding suggests that participants, when faced with moments that are associated with mixed emotions (i.e., both positive and negative), prefer to convey the passage of time by assigning agency to the event itself.

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Chapter 1: Introduction

Our perception and expression of time changes throughout our lifespan. Children and teenagers typically behave like they will live forever, with no consideration of death. In contrast, it is common for older adults to engage in activities that indicate a shift in priorities, or goals, as they cope with the process of dealing with their own mortality -- e.g., dedicating more time to engaging with their spirituality by increasing the number of times they go to church (Johnson,1995; McFadden, 1996). There are various communicative ways to deal with one's mortality. Indeed, despite the weakness of vocabulary to describe the relatively harrowing experience of hurtling towards the moment of our death, as poet Billy Collins (2008) notes, the passage of time and acceptance of death's imminence are among the great classical themes. Scholars have used a variety of figurative language to describe the metaphorical passage of time, often assigning agency (i.e., the cause or initiator of an event) to time or death itself (e.g., *death is at my doorstep*; Kroeger, 2005). Writer/director Charlie Kaufman (2020) contemplated how we as humans remain stationary in relation to time as it passes through us like a freezing wind, taking with it our heat and leaving us with nothing but our old age. Poet Emily Dickinson (1890/1960) even assigns a passive role to her own immortality sitting beside her as she awaits a personified death to stop and pick her up via carriage on his evenly paced way. Miller and Johnson-Laird (1976) noted that as time slips into the future, our perception of the present moment's relation to its past and future counterparts creates the feeling of succession throughout our lives. Although we as humans can do nothing to affect the passage of time, our awareness

that time is ours to lose becomes increasingly top of mind as we grow older. This framing of time as a limited resource of one's life has implications for emotion, cognition, and motivation, and provides an effective analog for discrete time periods, or life events, as well.

This study explored how imagined future life events affect a communicator's temporal agentic language use and social goal generation. Participants were asked to describe the beginning, middle, and end of life events they expect to happen in the future. The temporal agency assignments and social goal generation they made were then analyzed. Temporal agentic language use was operationalized as human (e.g., we're coming up on our vacation) or event (e.g., our vacation is coming up). Social goal generation was operationalized as instrumental goals (i.e., desire to acquire knowledge or experience) or emotional goals (i.e., desire to regulate one's emotion). It was hypothesized that participants would use human agency when describing the beginning of an imagined future life event, and event agency when describing the end of an imagined future life event. Further, it was hypothesized that participants would generate more emotional goals when describing the end of an imagined life event compared to the beginning of one, and more emotional goals than instrumental goals when describing the end of an imaged future life event.

The role that perceived time plays on language use has been explored by various scholars in many theoretical contexts. The subsequent chapter describes the theoretical foundations of this study: Socioemotional Selectivity Theory, perceived temporal scarcity, affective orientation, agency assignment, and poignancy. This study contributes to this

body of literature by examining the ways imagined future life event beginnings, middles, and ends impact the use of temporal agency assignment and generation of social goals.

Chapter 2: Literature Review

SOCIOEMOTIONAL SELECTIVITY THEORY

Behavioral scientists have long recognized the important role that the monitoring of time's passage plays in human behavior. Skinner (1933) demonstrated its significance in reinforcement learning, Piaget (1954) explained how it grounds children's development of causal reasoning, and Neisser (1988) posited its central role in our sense of self continuity and change over the lifespan. Time monitoring also figures prominently in personality constructs such as the delay of gratification (Mischel, 1989), internalized urgency experienced by Type A personalities (Friedman et al., 1986), and Zimbardo's (1999) analyses of temporal orientations that prioritize the past, present, or future.

The pivotal role of time monitoring in human motivation and goal selection is the focus of Carstensen's "socioemotional selectivity" theory (SST hereafter; Carstensen, 2006; Carstensen, Issacowitz, & Charles, 1999). In its initial formulation, Carstensen posited that our perception of the time remaining in our lives exerts a strong influence on our motivation. Specifically, she argued that systematic shifts in goals occur as we age due in part to the fact that age is inversely associated with time remaining in life. Moreover, because time "horizons" (i.e., the perceived end of significant life intervals – childhood, adolescence, adulthood, marriage, career, etc.) tend to shift gradually rather than abruptly, SST predicts incremental changes in goal selection along a number of dimensions that are most salient among older populations but can also be among younger people. For example, Fung and Carstensen observed that among young adults who perceive lifetime remaining as limited (as result of a cancer diagnosis, belonging to a violent gang, etc.), there is a

preference for activities that entail enjoying the present rather than preparing for the future. Similarly, younger adults who are approaching the end of "time as they know it" (e.g., seniors about to graduate from college) also exhibit such a preference. In turn, when older adults are primed to expand their time horizons (e.g., imagining various leisure activities they will enjoy after retirement), they prefer preparatory activities (e.g., learning the geography of a country they plan to visit) over more present-oriented activities. By treating the perception of time horizons as a motivational factor, SST accounts for age differences in goal selection in terms other than age-related physical or mental decline (Carstensen, 1993).

Empirical research testing the tenets of SST has benefitted our understanding of how people structure their lives in accordance with their perception of time horizons. The premise of the theory is that goals are always set in a temporal context. Early in life, the knowledge that we are mortal is easily set aside and mainly cognitive rather than affective in representation. With seemingly "unlimited" time horizons, people set goals that help them prepare to make a place for themselves in a complex world they are just beginning to understand. The focus in this phase is on preparation, learning, and exploring (Ebner, Freund, & Baltes, 2006). However, in later life the sense that time is running out becomes salient. Strough et al. (2016) observed that people begin to report limitations on future possibilities at roughly 50 years of age, which is accentuated further around age 60 when people increasingly report the perception that time is running out. When time is perceived as limited, goals shift to ones that are "realized in the doing" and goals about emotional meaning and satisfaction take precedence over others pertaining to exploration and

preparation (Scheibe, English, Tsai, & Carstensen, 2013). Theoretically, the awareness of time left leads people to desire more time with close social partners and less time with acquaintances and novel social partners (Lang & Carstensen, 2002; Fung & Carstensen, 2006). Preferences emerge for emotionally meaningful (Fung & Carstensen, 2003) and positive (Mather, Charles, & Carstensen, 2003; Löckenhoff & Carstensen, 2007) information.

SST describes how time influences how we define and pursue two types of social goals identified as "instrumental goals" and "emotional goals" (Carstensen, 1999; Fung, Carstensen, & Lutz, 1999). We pursue instrumental goals by attempting to obtain knowledge or experience during an interaction. We pursue emotional goals by attempting to regulate our emotional state by interacting with others. Instrumental goals are characterized by the pursuit of knowledge: A college freshman spends her time making new friends at the dorm or taking time after class to speak with the professor. Emotional goals are characterized by the regulation of emotion: A college senior prefers to spend her time hanging out with friends she met four years ago rather than meeting new ones (Lang & Carstensen, 2002).

We acquire knowledge, or pursue instrumental goals, through social interaction (Carley, 1986). The majority of the information we know about language use, cultural meaning, and behavioral norms is gleaned by listening to and watching those around us (Pica, T., 1987; Reed, et al., 2010; Daniels, 2012). As teenagers, our social exposure to a diversity of peers allows us to determine our own set of morals, contextualize our role in society, and begin to understand our social identity by participating in a consistent

interactive series of trials and errors. In fact, our inquisitive behavior can be explained by our motivation to learn about the physical and social world. For instance, a couple on their first date may engage in conversation about future-oriented topics to assess their compatibility and potential future together (e.g., *what's your favorite type of movie to watch?* or *how do you like to spend time while on vacation?*).

In contrast to the pursuit of instrumental goals, our social lives often serve an emotionally regulative function. This function is a primary reason that we are motivated to be social with others (Rothbart, 1994; Carstensen, et al., 2000). The concept of emotional goal pursuit, however, extends beyond simple regulation. Studies using the SST construct have included within their definition of emotional goals a desire to derive meaning from life, to create intimacy with a significant other, and to establish psychological well-being.

These social goals may become salient simultaneously and are sometimes opposing. The two categories of instrumental and emotional goals are not mutually exclusive to each other. All behaviors enacted in pursuit of a goal include an emotional component (Zajonc, 1997). Within the intention to pursue an instrumental goal, there lies emotional valence. In contrast, attempting to fulfill emotional goals may involve a component of information seeking. Further, if an event occurs where information is particularly relevant and the acquisition of this knowledge is time sensitive, priority will be given to pursuing this instrumental goal regardless of the actor's perceived temporal limitations (Turk-Charles, Meyerowitz, & Gatz, 1997). For example, a college senior participating in their graduation ceremony who perceives the future as limited will still seek out information related to the event's procedures so as to enter, sit, stand, and walk at

the appropriate times. It would be misleading to identify some goals as instrumental or emotional in this paper without this caveat. Instead, SST's distinction between and focus on instrumental goals and emotional goals serves as a dichotomous yet mutually inclusive framework of motivations in which some are oriented towards knowledge acquisition or future investment, and some are oriented towards the achievement of psychological well-being.

The difference between these social goals is the priority of preparation for the future vs. the gratification in the present. The desire to meet a new relationship partner, for example, is most likely due to what the future holds for the relationship. The emotional effect this has on the relationship seeker will be realized much later in the course of the engagement. The pursuit of social interaction and intimate connection during formative years is more likely due to the exhilaration that this novelty provides. And although these social experiences may involve even a high level of emotion, the driving motivation to pursue them is not primarily psychological well-being. So although the categories outlined above, "instrumental" and "emotional," do not explicitly indicate binary types of motivation, they provide the heuristic value needed to effectively explain the behavior enacted in the pursuit of social goals. In summation, SST is less concerned with differentiating these social goals. Rather, the theory serves as a groundwork for predicting how time affects our social goal selection, which directly precedes the enacted behavior intended to achieve that goal.

Finally, SST posits that endings are associated with a qualitative shift in one's emotional state. As people approach the end of a salient life period (e.g., one's lifespan,

career, college experience, etc.), they become more selective in their social choices, prioritizing emotionally meaningful partners over novel ones (Carstensen el al., 1997). Studies suggest that older individuals are more adept than younger people at self-regulating their emotion (Lawton, Kleban, Rajagopal, & Dean, 1992). To put it another way, one's antecedent regulation of emotion improves over the course of one's life, allowing them to strategically optimize emotional well-being (Gross, 1998). Thus, as we grow older, we acquire the social skills and support to avoid negative experiences and prioritize positive ones.

PERCEIVED TEMPORAL SCARCITY AND AGENCY

SST posits that perceived time remaining in a significant life interval shapes goal pursuits, preferences, and emotional well-being. The theory presumes that as we approach the horizon of such an interval, we perceive time as a limited resource and become keenly aware that "time is running out" before a major change in life occurs. A central premise of this thesis is that the agency implied by this stock temporal idiom directly reflects how we communicate about time when we sense its scarcity. Specifically, this study examines the extent to which we encode in language the agency time acquires when we perceive it as limited and prioritize social goals based upon it.

We construct and communicate our understanding of time, an abstraction, by using language typically associated with more tangible concepts found in the physical world (Lakoff & Johnson, 1980; Miller & Johnson-Laird, 1976). Specifically, we use language meant for the description of spatial relations as a primary representation of time. Note that these linguistic conventions used to describe changes that occur in the domains of both

time and space overlap. See Table 1 for examples of how spatial and temporal similarities can be used. For this paper, the descriptions used for indicating not only spatial relations, but movement within a spatial plane, set the groundwork by which a means of articulating temporal relations can be established.

This analogical application from spatial expressions onto temporal ones is made possible by considering time as unidimensional, directional, and dynamic (Clark, 1973). Spatial expressions that contain two or more dimensions (i.e., multidimensional) do not appear in the common language that is used for describing time. For example, while the single dimension of physical length may be used for the description of time (e.g., *will this ceremony be long or short?*), descriptions using an adjective pair with three dimensions does not convey an expression of time that is common in the English language (e.g., *will this ceremony be thick or thin?*). Additionally, descriptions of time that are phrased with directional order (e.g., *do people get married before or after their honeymoon?*) convey temporal meaning while descriptions of time that are contrastingly phrased with directional symmetry appear nonsensical when the intention is to convey a temporal expression (e.g., *do people get married to the left or the right of their honeymoon?*). Finally, time is often described by using expressions that convey physical or dynamic movement (e.g., *our vacation is approaching* or *that vacation flew by*).

In addition to these overlapping spatial and temporal terms, the expression of time in the English language also relies on two metaphors to convey temporal change. Our reality is structured by the patterns of our bodily experience, our interaction with objects in the physical world, and our spatial and temporal orientation (Johnson, 1990). Thus, these

two temporal metaphors are based on how we experience and express the physical movement of our own bodies. The image schema established by embodiment theory is the foundation over which a linguistic spaciotemporal link can be made. This connection is an example of how our perception of time is conceptualized as an embodied abstraction (Clark, 1973). For example, the metaphor usage of the following two sentences differs in two ways, "We've passed the deadline" and "The deadline has passed." First, the symbolic movement described in each sentence expresses opposite direction (i.e., back to front vs. front to back). In the first sentence, it is implied that the entity that is moving (i.e., *we've*) is heading towards future time, leaving the deadline in the past (back to front). In the second sentence, it is implied that the entity that is moving (i.e., *the deadline*) is heading towards the past, and on its way, has passed the speaker (front to back). Second, agency is assigned to different entities in each sentence. An agent, within the context of linguistics, refers to the initiator of an event (Kroeger, 2005). Considering that the event in question is the passage of time, agency in this context is the instrument with which temporality is changed. In the first sentence, humans (*i.e., we've*) are the implied initiators of temporal change as they move past and away from the deadline event and into the future. Conversely, the second sentence assigns agency to the event (*i.e., deadline*) as it moves past and away from the stationary humans. Figure 2 illustrates how the metaphors of human agency and event agency are expressed on a spatiotemporal plane.

AFFECTIVE ORIENTATION AND AGENCY ASSIGNMENT

The reported study is concerned with how temporal agency is used to construct descriptions of imagined future events. Thus, the following section is dedicated to outlining

the relevant research concerning the connection between affective orientation, and grammatical voice and linguistic agency. The affective orientation that a communicator has towards an event can be indicated in a variety of ways. On one hand, someone's affective attitude towards a particular topic can be expressed directly. For example, someone may feel positively about the band, Fruit Bats, and say, "I like that band," or feel negative emotions towards their recent trip to London, and say, "I hated that trip." On the other hand, studies have suggested that both grammatical passive voice and temporal agentic expression may also be subtle indicators of one's affective orientation towards a topic.

Studies within the context of discourse theory help explain the various functions of grammatical passive voice. Functions include expressing negative attitudes towards people or life events, and a desire to distance oneself from responsibility or an emotional topic (Fowler, et al., 1979; van Dijk, 1988; Lamb, 1991; Ng & Bradac, 1993; Henley, Miller, & Beazley, 1995; LaFrance et al., 1997; Berman, 2005). The desire to linguistically create distance between oneself and an emotionally heightened topic will be discussed at greater length later in this section.

How people express their temporal experiences may be another indicator of affective orientation towards a life event (McGlone & Pfiester, 2009). Specifically, metaphors used to express temporal passage are one such example of agency assignment that may indicate a communicator's affective orientation. The temporal agentic assignment onto humans vs. events (e.g., *we're coming up on our vacation* vs. *our vacation is coming up*) expresses two separate spatiotemporal conceptual relations grounded in our perception

that time is an abstraction that can only be described with terms of embodiment (Clark, 1973). Further, the encoding and decoding of affective orientation is also based on the way we use language to describe our bodily movement. Embodiment theory suggests that our understanding of emotion and movement are intertwined, with positive affect connected to approach and negative affect connected to avoidance (Johnson, 1990; Kovecses, 2000). The implication that our physical experience, emotional state, and subsequent language use are connected is based in the etymological foundation of the word, emotion, which comes from the Latin verb emovere, or "moving out" (Oxford English Dictionary, 1989). Several studies suggest that this link helps explain some of the behaviors connected to the ways in which we process emotions. For example, participants across several studies have rated a variety of stimuli - visual images, words, faces, songs, and names - more positively when prompted during the engagement of arm flexion (a bodily movement that signifies approach orientation) compared to being prompted during the engagement of arm extension (a bodily movement that signifies avoidance orientation) (Cacioppo, Priester, and Bernston, 1993; Niedenthal, Barsalou, Winkielman, Krauth-Gruber, & Ric, 2005; Puca, Rinkenauer, & Breidenstein, 2006). This difference of use between approach and avoidance may be due to the communicator's desire to create a sense of closeness towards things they find pleasurable, and distance between unpleasurable things.

This link between our physical movement and emotional orientation is also reflected in our everyday figurative language use (Gibbs, 1994; Kovecses, 2000). For example, people commonly describe positive feelings with words associated with approach (e.g., *we're leaning toward renting an apartment downtown, I've become quite attached to*

this book, etc.) while negative feelings are more commonly associated with avoidance (e.g., *I've moved on from that chapter of my life, you seem distant today,* etc.). McGlone and Pfiester (2009) tested this affect – agency connection in two studies. In Study 1, they conducted a search of a 14 million English word-corpus for messages that included a spatial component and were used in a temporal context (e.g., a sentence that included the word, pass). They then used independent coders to determine whether the words in question were used to describe an event that was either valanced positively, negatively, or neutrally. Their results suggested participants assigned human agency to events they found pleasant (e.g., *you know that we're coming up on our tenth anniversary, and by God we are going to have us some fun on our own*) and assigned event agency to events they found unpleasant (e.g., *but when the time comes, she can't do things and she has to be cared for*). In Study 2, they prompted participants to describe recent experiences that were either pleasant or unpleasant. Participant responses were analyzed to determine whether the spatiotemporal words used to describe events indicated similar agentic language use to Study 1. Study 2's findings supported McGlone and Pfiester's hypotheses that human-agentic language is generally used to describe pleasant events, and event-agentic language is generally used to describe unpleasant experiences.

The above Study 2 assessed the temporal language use of participants who described either pleasant or unpleasant past experiences. Next, McGlone, Ballard, Merola, and McGlynn (2012) assessed the same temporal linguistic connection in a present event-valanced context. To conduct this study, McGlone and his colleagues analyzed a set of email exchanges between senior executives of the Enron Corporation during the 1999-2002

time period. These data were gathered and subsequently made available by the Federal Energy Regulatory Commission during its investigation into the company during its downfall. McGlone and his colleagues analyzed this batch of emails for metaphoric language use, specifically looking at the comparative frequency of human agency and event temporal agency assignment. The researchers chose email exchanges that were made within a single day and were grounded within the context of event or meeting that happened on that day. This allowed the researchers to compare the frequency of use of temporal agency assignment contained in the messages sent before and after the meetings. The results of this study supported its hypotheses: when senior executives exchanged emails about a positively valanced event, they more commonly used human agentic expressions (e.g., *I'm feeling great about this project, let's move on it quickly*) than event agentic expressions. In contrast, they more commonly used event agentic language when describing an event happening in the present that was negatively valanced (e.g., *that hiccup came out of nowhere and it's going to be hard to recover from it*).

POIGNANCY: THE INTERFACE BETWEEN SST AND AGENCY

In the studies recounted above, one trend remains consistent – people use temporal agency that is assigned to the event itself when describing negatively valanced events. This metaphor use may stem from the communicator's desire, outside of their awareness, to linguistically create distance between themselves and the event at hand. What remains is the reason for the desire to create this distance. Recall that SST suggests that the perception of limited time shifts one's motivations to the pursuit of experiences that maintain or create emotional meaning. The motivation to pursue an emotional goal is

based on one's desire to regulate their emotional state. This does not mean changing a negative emotion to a positive one, or vice versa.

Although studies suggest the use of passive voice and event agency assignment indicate negative feelings towards a subject, these linguistic devices have also indicated a desire to distance oneself from emotional topics. The studies above have focused on linguistic metaphor use for events that are either positive (e.g., a birthday celebration) or negative (e.g., a work meeting that did not go well). Consider, however, when the appraisal of the event is both positive and negative, producing mixed emotions, or poignancy.

Poignancy is a subset within the term "mixed emotions." While the broad term, mixed emotions, can include a combination of many emotional pairs (e.g., disgust/satisfaction, anger/joy, sadness/frustration, etc.), poignancy includes within its definition the awareness of endings, or loss of something previously owned. Further, this anticipation of an approaching time horizon is unique to the experience of poignancy compared to, for example, other mixed emotions like nostalgia, which is the feeling one gets when remembering significant past events (Wildschut, Sedikides, Arndt, & Routledge, 2006). This definition of poignancy is reflected in Kaufman's description of how we experience the progression of a lifespan, which not only gives agency to time itself, but also indicates when our life is taken from us during our final moments, it is time that is doing the taking. The increased awareness of mortality as one progresses through life takes place naturally and leads to the appreciation that the meaningful moments we hold dear to us don't belong to us forever. Although Lazarus' appraisal

theory (1991) suggests that the feeling of loss leads to negative emotion, the understanding that comes with the progression through one's life involves a positive emotion as well. Thus, poignancy consists of feeling both happy and sad while experiencing a meaningful ending. Further, an individual experiences an increase in poignancy when they encounter an ending that indicates temporal passage while simultaneously indicating a loss of something that is emotionally meaningful to them (Ersner-Hershfield, Mikels, Sullivan, & Carstensen, 2008).

Research in the field of aging and emotion has indicated that older individuals experience poignancy more frequently in everyday life compared to younger individuals (Carstensen et al., 2000; Ong & Bergeman, 2004). However, both older and younger individuals report the same level of mixed emotions when asked to describe similar imagined situations. For example, Ersner-Hershfield and his colleagues (2008) conducted a study in which participants were asked to imagine themselves in a location they considered meaningful to them. Participants across all ages reported an equal increase in mixed emotions when a time limitation was presented in the scenario compared to a no time limitation scenario. These results have two important implications. First, they are in alignment with SST's analogical argument that the desire to regulate one's emotional state occurs both at the end of life and at the end of a meaningful life event. Finally, the study provides evidence that the experience of poignancy commonly associated with aging is a result of encountering a meaningful ending, rather than the result of aging itself. This connection between time and poignancy has implications for affective orientation indicated by metaphorical language use.

Research in the field of discourse theory suggests that people use linguistic markers, such as the grammatical passive voice, to not only express negative feelings or a lack of responsibility, but also to create a sense of distance between themselves and emotionally heightened topics. For example, social workers in the field of mental healthcare are typically trained to use the grammatical passive voice when speaking about their patients' cases. This training is intended to create the sense that the healthcare worker maintains an objective stance towards their patients (Berman, 2005; Lamb, 1991). Similarly, studies have suggested that people in their everyday language use employ the grammatical passive voice when describing emotionally intense life events, such as mortality, career anxiety, illness, etc. (Henley, Miller, & Beazley, 1995; LaFrance et al., 1997; Ng & Bradac, 1993). Importantly, the use of metaphor to describe the passage of time manipulates agency in a similar manner to that of the grammatical passive voice (McGlone & Pfiester, 2009). Specifically, the use of event agency assignment indicates a speaker's desire to linguistically create distance between themselves and the event in question. This intersection, between emotionally meaningful endings and the use of event agency assignment, provides the final link on which the current study is based.

In this study, it was hypothesized that a causal link connects the following four constructs: perceived time (limited/limitless), motivation (instrumental/emotional), communicator affect (positive/negative), and agency assignment (human/event). When time is limitless, participants will pursue instrumental goals, maintain a positive affective orientation, and describe this pursuit with human agency. When time is limited, participants will behave in a way that regulates their emotions, maintain a negative affective orientation

associated with poignancy, and describe this pursuit with event agency. In the next section, a research experiment is presented.

Chapter 3: Current Study and Hypothesis

The current study investigates whether the link between motion and emotion affect how communicators encode the temporal passage of specific moments, or event components, (beginning, middle, end) of expected future events. For example, consider a future life event ending we anticipate experiencing, such as one's last day at their current job. SST predicts people's social goals to be directed towards fulfilling an emotional regulative function when experiencing the end of an event, and social goals to be directed towards fulfilling a knowledge seeking function when experiencing the beginning of an event. Describing the temporal passage of this expected final day in either agentic terms - human-agent or event-agent - is functionally equivalent. But the motivation to regulate our emotions during the end of things, which is typically associated with unpleasantness, may predispose us, outside our awareness, to frame these events in terms of avoidance, and use event-agentic language when describing them (e.g., *the final day will end with me saying goodbye to everyone*). In contrast, our motivation to seek out knowledge during the beginning of things, which is typically associated with pleasantness, may predispose us, outside our awareness, to frame these events in terms of approach, and use human-agentic language when describing them (e.g., *I'll pass some time learning the ins and outs of the office culture*). Thus, our social goals may drive us to use language that encodes temporal change based on a figurative approach-avoidance schema in which we actively look forward to the pleasant beginning of events by framing them with human agency, and passively accept the coming of unpleasant endings by framing them with event-agency. With this procession of logic, the following hypotheses are formulated:

Hypothesis 1: The temporal passage of an event beginning is modally encoded via a metaphor assigning temporal agency to humans (e.g., we are approaching event X).

Hypothesis 2: The temporal passage of an event ending is modally encoded via a metaphor assigning symbolic agency to the event (e.g., event X is approaching).

Hypothesis 3: More emotional goals will be used when describing the end of event than its beginning.

Hypothesis 4: More emotional goals than instrumental goals will be used when describing the end of an event.

Below, a study is reported in which participants were asked to describe the beginning, middle, and end of life events they expect to happen in the future. The temporal agency assignments they made and social goals they generated were then analyzed. The results indicate a connection between event component (beginning vs. end) and temporal agency assignment (human vs. event) and a connection between event component and social goals (instrumental vs. emotional).

Chapter 4: Method

PARTICIPANTS

A total of 327 survey participants were recruited via the online crowdsourcing platform *Prolific* (https://www.prolific.co). *Prolific* members complete surveys with academic and/or professional interests in exchange for monetary compensation. Participants received $1.27 as compensation for completing the survey. Participants were required to fulfill eligibility checks before gaining access to the study. First, they had to be a Prolific member above the age of 18 and below 65. The age high bound was set due to the nature of the survey's inquiry about imagined life events (a job, for example) that must take place in the future. Next, they had to be fluent in the English language. The conditions above were set in place to follow the guidelines of best practices for conducting online research. The overall sample included 129 females, 196 males, and 1 who preferred not to say. The mean age of participants was 24 years old.

STIMLUS MATERIALS, EXPERIMENTAL DESIGN AND PROCEDURES

The study employed a 3 X 3 factorial design with life event (relationship, job, or vacation) and event component (first day, average day, or last day) as within-participants factors. The dependent variable was the frequencies of human and event expressions in participants' life event narratives.

Participants were recruited via the crowdsourcing platform *Prolific* for the study, which was described as part of a project with the purpose "to better understand how people expect to experience different chapters of their life." After participants provided informed consent, they were randomly assigned to 3 of the 9 cells dictated by the factorial design.

Specifically, each participant described one event component (beginning, average day, or end) for each of the three life events (relationship, job, or vacation).

In composing their descriptions, participants were asked to name their first event (i.e., Condition #1: “Life chapter #1: Please consider a future relationship you expect to have with someone. This could be a friendship or an intimate relationship. Give your expected relationship a name (can be a person's name, a word, or a phrase”). After naming their life event #1, they were instructed to “describe in detail how [they] expect to spend [their] time on the first day of the relationship (i.e., The first day after you made the relationship "official" by mutually committing to the relationship).” Participants followed the same prompt for the next two life events within their condition. For example, in Condition #1, they were asked to “describe in detail how [they] expect to spend [their] time on an average day of the vacation (i.e., any day that does not involve travel or checking in/out)” and “describe in detail how [they] expect to spend [their] time on the last day of the job.” These instructions also included the following language for each condition and life event: “We are interested in where you expect to go, whom you expect to speak with, and what you expect to do on this day.” Our aim in asking them to include movement and activity language was to increase the likelihood that they use the linguistic expressions that were the focus of the study.

After providing this information, participants were taken to a page that described the difference between emotional goals and instrumental goals (“When we fulfill emotional goals, we aim to experience a positive emotion (love, happiness, pride, intimacy, etc.) that another person (or persons) makes possible. When we fulfill instrumental goals, we aim to

acquire knowledge or experience that another person (or persons) can provide for us."). Participants were then asked to define emotional goals and instrumental goals in their own words. Finally, participants were shown a page where all three of their life event narratives were displayed. They were asked to copy and paste the sentences that indicated when they pursued emotional goals, and sentences that indicated when they pursued instrumental goals. Finally, participants were asked basic demographic questions (age, ethnicity, level of education, employment, income, and marital status). The average participant took 25 minutes to complete the survey.

SURVEY CHECKS

Four checks were included throughout the interview to ensure appropriate participation response given the research goals. First, every participant was required to name each of their life events (i.e., "Springtime in the Maldives") to ensure they committed to a specific scenario, rather than describing an experience without context. Next, a 375-character minimum was used for all "description" fields to ensure participants wrote at least 5 - 8 sentences for each description. Emotional goals and instrumental goals were then described to the participants. The participants were then asked to define in their own words what these social goals meant to them. Finally, at the end of the survey, every participant was shown their set of descriptions and asked them to copy and paste into a text field where they pursued emotional goals and where they pursued instrumental goals. These checks indicated that participants followed instructions throughout the flow of the survey.

Chapter 5: Results

AGENCY ASSIGNMENT CODING

Participants' event component descriptions ranged in length from 84 to 188 words, with an average length of 126.43 words. Each description was scanned using a Python script developed by McGlone and Merola (2016). This script codes the occurrence and frequency of temporal agency assignment expressions in a 3-step process. First, it searches the text for 22 spatiotemporal terms (*approach, go, pass*, etc.) and their cognates (*approached, went, passing*, etc.) that can appear in human and event agent temporal expressions. Second, it determines whether the term is being used in a spatial sense (e.g., *the train is approaching*) or temporal sense (e.g., *the evening is approaching*) based on semantic analysis algorithms in the Natural Language Toolkit (NLTK), an open-source Python library for natural language processing. If the term is determined to be used in a temporal sense, the script then makes an educated guess about whether the term is being used to assign temporal agency to a human (e.g., *we'll pass the time talking)* or an event (e.g., *the time will pass quickly*).

Scanning participants event descriptions with the script identified a corpus of 2,328 temporal expressions, of which 52.1% were classified as human agentic and 47.9% as event agentic. Inspection of a sample of 100 of these expressions (50 human- and 50 event-agentic) by a human judge indicated that the script correctly identified the temporal agency assignment in 96 of 100 cases (96%). The average frequency of human- and event-agentic expressions for each life event X event component description is presented in Figure 1.

AGENCY ASSIGNMENT BY LIFE EVENT AND EVENT COMPONENT

The temporal expression frequency data were subjected to 3 X 3 factorial analyses of variance with life event (relationship, job, or vacation) and event component (beginning, average day, or ending) as repeated factors. Separate analyses were conducted on the human agentic and event agentic expression frequency data, respectively. Before formal analysis was conducted, preliminary measures were taken to ensure the validity of our conclusions. The potential assumption violations associated with factorial ANOVA tests were addressed. For instance, the data's descriptive statistics indicated no serious departures from the normality assumption. Furthermore, for Q1 Human Agency, Levene's test for the equality of variance indicated that population cell variances are equal at the 0.05 level, F (4, 321) = 0.209, $p > 0.05$; for Q1 Event Agency, Levene's test for the equality of variance indicated that population cell variances are equal at the 0.05 level, F (4, 321) = 0.113, $p > 0.05$; for Q2 Human Agency, Levene's test for the equality of variance indicated that population cell variances are equal at the 0.05 level, F (4, 321) = 0.474, $p > 0.05$; for Q2 Event Agency, Levene's test for the equality of variance indicated that population cell variances are equal at the 0.05 level, F (4, 321) = 0.872, $p < 0.05$; for Q3 Human Agency, Levene's test for the equality of variance indicated that population cell variances are equal at the 0.05 level, F (4, 321) = 0.740, $p > 0.05$; for Q3 Event Agency, Levene's test for the equality of variance indicated that population cell variances are equal at the 0.05 level, F (4, 321) = 0.368, > 0.05.

Preliminary analyses did not reveal any significant main effects or interactions involving participants' demographic characteristics (gender, age, etc.), so subsequent

analyses collapsed across these factors. Separate 3 X 3 factorial repeated measures analyses of variance were conducted on the frequency of human- and event-agentic expressions. These analyses did not reveal reliable main effects of life event or event component for either expression type, F (1, 321) < 1 in both cases. However, there were reliable interactions of these factors for the frequency of human-agentic expressions (F (2, 642) = 4.12, p = .016) and for the frequency of event-agentic expressions (F (2, 642) = 7.81, p = .00004).

Single-df planned comparisons (Wickens & Keppel, 2004) were conducted to test hypotheses about differences in average frequency between the conditions. One of these planned comparisons indicated that the average frequency of human agentic expressions was higher in descriptions of event beginnings (M = 1.34) than descriptions of an average day (M = 1.12) or endings (M = 1.08), F (1, 642) = 5.23, p = .023. A second comparison indicated that, in contrast, the average frequency of event agentic expressions was higher in descriptions of event endings (M = 1.45) than descriptions of an average day (M = 1.19) or endings (M = 0.92), F (1.,642) = 10.12, p = .0015. These comparisons are consistent with H1 and H2. Participants used more human-agentic expressions to describe event beginnings than average days or endings; however, they were more inclined to use event-agentic expressions to describe endings than average days or beginnings. The implications of these findings are discussed in the next chapter.

GOALS ANALYSIS

A comparison of emotional goal generation between participants' descriptions of the end of an event and the beginning of an event was conducted (H3). Additionally, a comparison between emotional goal generation and instrumental goal generation when describing the end of an event was conducted (H4). Participants' goal generation ranged from 0 to 11, with an average number of 1.24 goals. Recall that participants, after learning about emotional and instrumental goals, were provided with the descriptions they wrote and asked to identify within their own descriptions the emotional and instrumental goals they used in their three life events (job, vacation, relationship). Participants were then asked to copy and paste each goal entry into a separate text field. Each goal was then coded into one of six possible options: pursuit of emotional goal during the beginning, middle, or end of an event, or pursuit of instrumental goal during the beginning, middle, or end of an event.

This coding process identified 1,214 total goals used by participants, of which 75.0% were classified as emotional goals and 25.0% were classified as instrumental goals. In total, participants used 576 emotional goals when describing the end of a life event (job, vacation, relationship), while 334 emotional goals when describing the beginning of a life event. Additionally, participants used 576 emotional goals when describing the end of a life event, while 304 instrumental goals when describing the end of a life event. These comparisons are consistent with H3 and H4. Participants used more emotional goals to describe event endings than beginnings and used more emotional

goals than instrumental goals to describe event endings. The count of emotional- and instrumental-goals for the relevant event endings and beginnings is presented in Figure 2.

Chapter 6: Discussion

THEORETICAL IMPLICATIONS

The primary goal of the study was to determine how priming participants with an event component (beginning, middle, end) affected the agentic language they used (human, event). The expectation was that the results of this study would suggest which type of social goals the participants used given their temporal context based on the specific condition we provided them (human agency when pursuing instrumental goals at the beginning of events, and event agency when pursuing emotional goals at the end of events). These assumptions were tested with four hypotheses. The first hypothesis was supported by the results; participants used more human agentic language when describing the beginning of their imagined future life event. The second hypothesis was supported by the results; participants used more event agentic language when describing the endings of their imagined future life event. The third hypothesis was supported by the results; participants generated more emotional goals when describing the end of an event than its beginning. The fourth hypothesis was supported by the results; participants generated more emotional goals than instrumental goals when describing the end of an event.

With respect to the first two hypotheses, the results indicate that communicators commonly encode the temporal passage of event endings by assigning agency to the event itself (e.g., *as the vacation comes to a close*). In contrast, they encode the passage of the event beginnings by assigning agency to themselves (e.g., *when we will get the trip started*). This agency assignment pattern is consistent with previous studies of the conceptual connection between motion and emotion (Cacioppo et al., 1993; Gibbs, 2006).

This suggests that people's communication about different time periods of life events is influenced by a linguistic spatiotemporal link.

Further, the results are consistent with previous studies and the broader expectation that affective orientation affects temporal agency assignment. Several studies have reported findings similar to the results described in the present study. For example, McGlone and Merola (2016) predicted that people reminded of their own mortality would assign temporal agency to events they expected to occur in the near future. In this way, when participants were exposed to the mortality salience induction condition, their cognitive orientation shifted towards a spatiotemporal metaphor use that is commonly associated with avoidance. Similarly, McGlone and Pfiester (2009) compared the difference between how participants encoded agency assignment when describing a pleasant event that occurred in the past to their agency assignment when describing an unpleasant past event. Their findings suggest that people assign event-agency to unpleasant events and human agency to pleasant events.

Additionally, studies have been conducted to assess how participants interpret messages that vary in human- or event- agency usage. For example, McGlone and Harding (1998) assessed participant temporal language comprehension as they read sentences that performed the same function of communicating temporal passage but used different agentic assignment across conditions. The agency assignment (human or event) of the event in question (The meeting scheduled for next Wednesday has been (1) moved forward, (2) advanced, or (3) pushed back, two days) influenced how participants understood the meaning of the sentence. Similarly, Boroditsky and Ramscar (2002) assessed participant

preference of human- or event- agency assignment when reading different versions of the same sentence. In line with the current study's findings, participants preferred human-agency assignment when physically engaging in forward movement, and event-agency assignment when viewing an object moving toward them.

With respect to the second two hypotheses, the results indicate that communicators commonly generate emotional goals (i.e., a desire to regulate one's emotion) when describing the end-of-life events. This is in contrast to both generating emotional goals at the beginning of life events or generating instrumental goals at the end-of-life events. This goal generation pattern is consistent with SST's notion that systematic shifts in motivation and subsequent goal selection occur as we approach time "horizons" (i.e., the perceived end of significant life intervals – childhood, adolescence, adulthood, marriage, career, etc.) in various chapters of one's life.

Further, the results are in concert with previous studies and the broader expectation that the perception of limited time affects one's motivation. It is worth noting here that while some studies focus on the age difference in motivation while other studies use discrete time periods as a proxy for one's lifespan (e.g., one's time in college, a relationship, etc.), the underlying assumption is the same: as one approaches a time horizon (e.g., one's death or college graduation), the awareness of time's limitation becomes salient and affects one's motivation. Several studies have reported findings similar to the results described in the present study. For example, Scheibe, English, Tsai, & Carstensen (2013) examined age differences in one's ideal positive state and found that younger participants idealized both positive states about which the study was concerned (low-arousal, peaceful,

relaxed and high-arousal, proud, excited) while older participants idealized only the low-arousal positive state. This suggests that as people approach a time horizon, they prioritize not simply positive experiences, but specifically pursue emotion-regulatory goals within the category of positive experiences. Similarly, Ebner, Freund, & Baltes (2006) assessed goal orientation across adulthood and found that younger adults reported a growth orientation in their goals while older adults reported an orientation toward maintenance and loss presentation. Further, while younger adults' perception of loss prevention was negatively correlated with well-being, older adults' perception of loss prevention and maintenance was positively associated with well-being.

Additionally, studies have been conducted to account for age differences in goal selection outside the context of age-related physical or mental decline. For example, Fung & Carstensen (2006) examined the social goals of participants before and after real-world events (September 11 attacks in the United States and the SARS epidemic in Hong Kong) that primed participants of the fragility of life. The researchers found that both younger and older participants, when the fragility of life became salient, reported a shift in motivation toward the pursuit of emotionally meaningful experiences. This suggests that regardless of age, the heightened awareness of the limitation of time influences one's motivation. Similarly, Löckenhoff & Carstensen (2007) assessed participant health care plan decision-making and found that both younger and older participants exhibited the same information acquisition and recall behavior when future time perspective was controlled. This suggests that the perception of an approaching time horizon influences one's decision making, regardless of age. These studies, along with the present study, suggests that people's

communication about different time periods of life events is influenced by a temporal-motivational link.

LIMITATIONS

This study has several limitations. First, I used a limited subject pool of participants, the majority of which identified as white and male. This pool limits the external validity of my study because it does not accurately represent the U.S. population. Second, the study looked at one description per life event (beginning, middle, end) while randomizing the life event type (relationship, job, vacation) with a total of three descriptions per participant. Thus, each participant only described one portion of each type of life event. In an ideal world, the study would request that each participant describe all three life events from beginning to end. This would allow for a more thorough understanding of each participant's agentic language throughout each life event type, allowing me to compare each description within a participant's full response. The study's third limitation is that my view into each participant's description is limited to a simple paragraph. In an ideal world, these descriptions would be brought out through an in-person interview process, followed up by transcription and linguistic analysis. Finally, a longitudinal study would be more appropriate, given the research goals. For example, a research team might go beyond requesting a participant's imagined event, and instead, locate and interview participants who are experiencing the very life event they describe (i.e., interview employees on their first day, an average day, and on the final day of their job, etc.).

CONCLUSION

This study underlines the importance of examining the interplay between time, motivation, emotion, and language. As we grow older, our perception that time is a limited resource becomes more salient. Thus. our goals shift from the pursuit of knowledge to the regulation of emotion. Discrete moments, or life events, provide an effective analogue to the span of one's life. Specifically, as we approach meaningful life event endings, we pursue emotional goals, with an emphasis on the desire to avoid negative or emotionally heightened feelings. This study's findings illustrate that our symbolic language use reflects such motivations.

Appendix – Survey Condition Example

Each cell denotes a subsequent survey page.

Condition #1: The first day of a relationship, an average day of a job, the last day of vacation
Life chapter #1: Please consider a future relationship you expect to have with someone. This could be a friendship or an intimate relationship. Give your expected relationship a name (can be a person's name, a word, or a phrase):
Description of expected relationship: "[Participant's given name, word, or phrase]". Please describe in detail how you expect to spend your time on the **first day** of the relationship (i.e., The first day after you made the relationship "official" by mutually committing to the relationship). Do not include administrative details (i.e., "We will sit on the couch and watch Netflix."). Please answer in approximately 75-100 words (375 character minimum).
Life chapter #2: Please consider a job you expect to work at in the future (this could be a job 6 months from now, or even 10 years from now). If you currently have a job, please imagine a different job you might consider having in the future. Give your expected job a name (can be a word or a phrase):
Description of expected job: "[Participant's given name, word, or phrase]". Please describe in detail how you expect to spend your time during an **average day** on the job. We are interested in where you expect to go, whom you expect to speak with, and

what you expect to do on the job. Do not include administrative details (i.e., "I will sit down and log on to my computer."). Please answer in approximately 75-100 words (375 character minimum).
Life chapter #3: Consider a vacation you expect to go on in the future. Give your expected vacation a name (can be a word or a phrase):
Description of expected vacation: "[Participant's given name, word, or phrase]". Please describe in detail how you expect to spend your time on the **last day** of the vacation. We are interested in where you expect to go, whom you expect to speak with, and what you expect to do. Do not include administrative details (i.e., "I will check into the hotel." or "I will buy a plane ticket."). Please answer in approximately 75-100 words (375 character minimum).
Goals Prompt: We spend time with other people for two main reasons - to fulfill emotional goals or instrumental goals. When we fulfill emotional goals, we aim to experience a positive emotion (love, happiness, pride, intimacy, etc.) that another person (or persons) makes possible. When we fulfill instrumental goals, we aim to acquire knowledge or experience that another person (or persons) can provide for us. For example, an emotional goal would be to relax after a long day. An instrumental goal would be to learn how to drive a car. It isn't necessary to be with another person to achieve either of these goals (it is possible to relax or learn to drive by yourself), but oftentimes people achieve these and other goals in the presence of other people.

On the previous page, we defined the ideas of "emotional goals" and "instrumental goals." On this page, we want you to paraphrase the definitions we gave you. That is, we want you to define these goals using your own words, not ours. Please put your definitions in the boxes provided below.
(1) How would you define Emotional Goals? (1 - 2 sentences)
(2) How would you define Instrumental Goals? (1 - 2 sentences)
Thank you for defining Emotional and Instrumental Goals! Now, reflect on what you told us about your expected future life chapters. What you told us is reprinted below. Reread each of these descriptions carefully and identify emotional goals and instrumental goals that you included in your descriptions. Please copy and paste the different goals in your descriptions to the boxes provided below.
Copy and paste the sentences where you pursued Emotional Goals
Copy and paste the sentences where you pursued Instrumental Goals

Table 1. Participant response examples reflecting human- or event- agency assignment.

Agency Assignment	**Event Component**	**Participant Response**
Human	Vacation Beginning	"When *we get the trip started*, we will check out the beach and try some of the local cuisine."
	Job Beginning	"On the first few days of the job, *I'll pass some of the time* learning the ins and outs of office culture."
	Relationship Beginning	**"***We will begin the relationship* by building a bond as we learn about all we have in common."
Event	Vacation Ending	"*As the vacation comes to a close*, we will return to the place we liked most."
	Job Ending	"*My last day will finish up* with a lot of goodbyes to the coworkers I've gotten to be friends with."
	Relationship Ending	"When *our time together ends,* I hope there will be lots of fond memories of all the happy and fun things that happened."

Table 2. Parallel spatial and temporal English expressions (McGlone & Pfiester, 2009).

Space	**Time**
From Austin to Dallas	*From 8 a.m. to 6 p.m.*
In my apartment	*In 2020*
We are four miles behind them.	*We are four hours behind them.*
The Wall of China lies ahead of us.	*The future lies ahead of us.*
We're getting close to the festival gates.	*We're getting close to summer time.*
The carriage is fast approaching.	*Christmas time is fast approaching.*

Table 3. Participant response examples of social goal generations.

Social Goals	**Event Component**	**Participant Response**
Instrumental Goal	Vacation Ending	"I would love to meet someone in Korea with whom I could share my culture and learn from, since I'm from Europe our culture is very different."
	Job Ending	“I'll speak in private with some of my right hands and give them a briefing about the next steps that I think the company should follow.”
	Relationship Ending	“While we eat we would talk about what it had went wrong, what could we do better in order to improve our personalities and prevent mistakes we made in other future relationships and enjoy a good wine.”
Emotional Goal	Vacation Beginning	“In Bali, first of all I expect to have fun and get a lot of sun. I think she would have the time of her life there with me.”
	Job Beginning	“While working, I would expect respect, trust and professionalism from other employees.”

	Relationship Beginning	“I would be very anxious and nervous for sure, nothing can go wrong, everything has to be perfect, but also I would be extremely happy, so I would spend that first day doing anything she would like to do, like going to the movies or going to a really nice restaurant, or plan a really nice date for her.”
Emotional Goal	Vacation Ending	“In the afternoon we will visit her family, and spend some time with them. I would wake up very early to go to the sea and swim. I would go on a last tour of the tourist places of the city.”
	Job Ending	“I also would spend time with everyone that I got close to, talk during lunch and work and try to organize a night out, or just a dinner with everyone, to say goodbye.”
	Relationship Ending	"I would probably like to reminisce a little bit about everything we've gone through together." "I think I would accept it and

		try to make the last day as good as possible."

Figure 1. Mean frequency of human- and event-agentic expressions for each life event by event component.

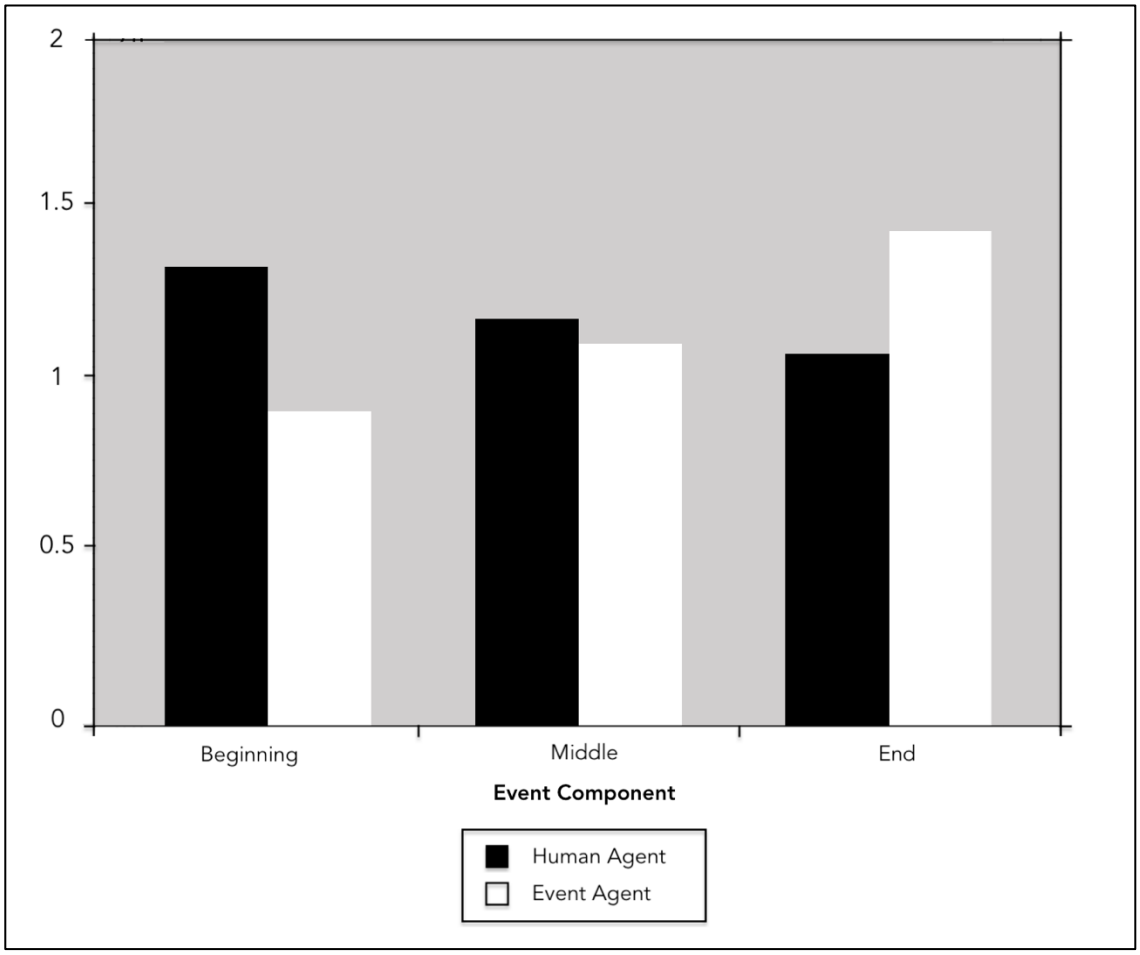


Figure 2. Count of emotional- and instrumental-goals for relevant event endings and beginnings.

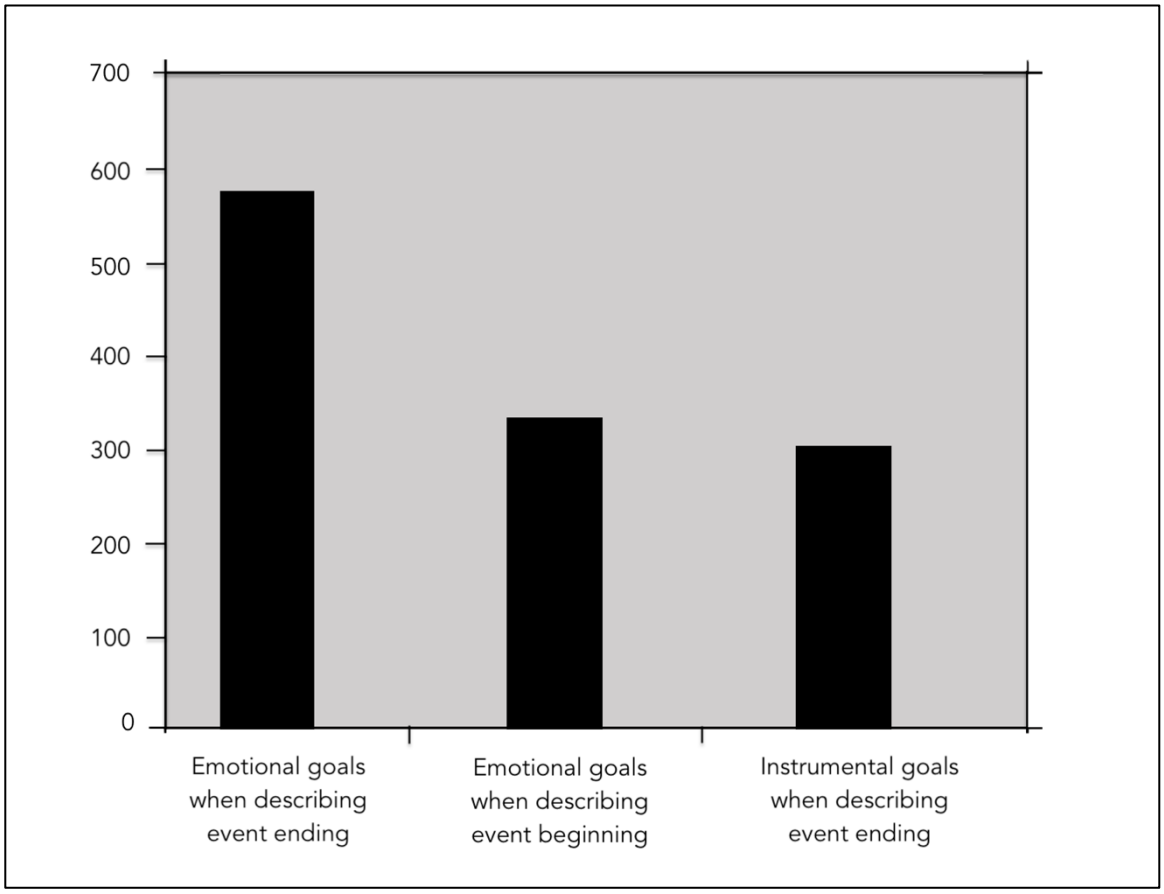
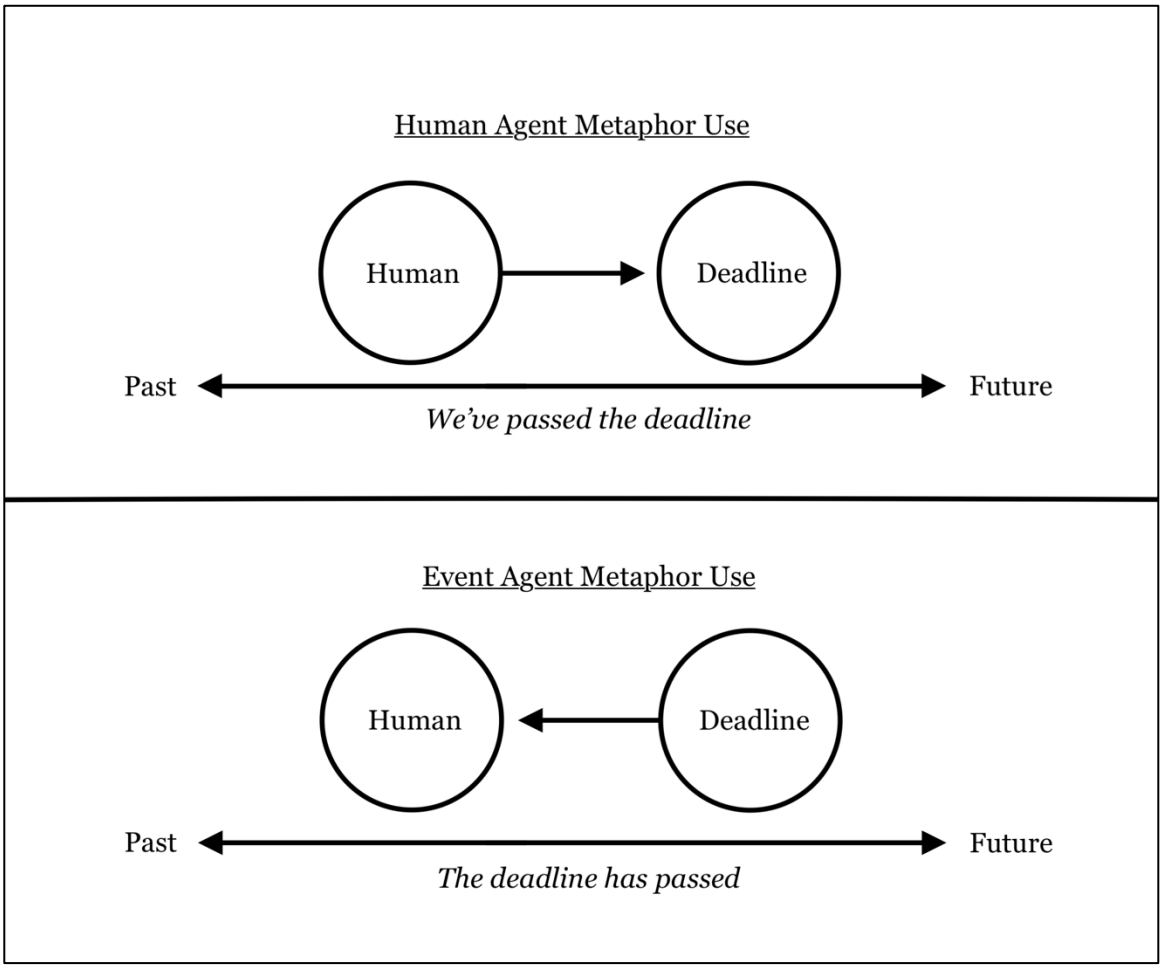


Figure 3. Two metaphors that convey temporal change (McGlone & Pfiester, 2009).



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